Mound Long Term Stewardship Initiative

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Project Manager

Deactivation and Decommissioning Focus Area
Mid-year Review
March 5, 2002

Mound History

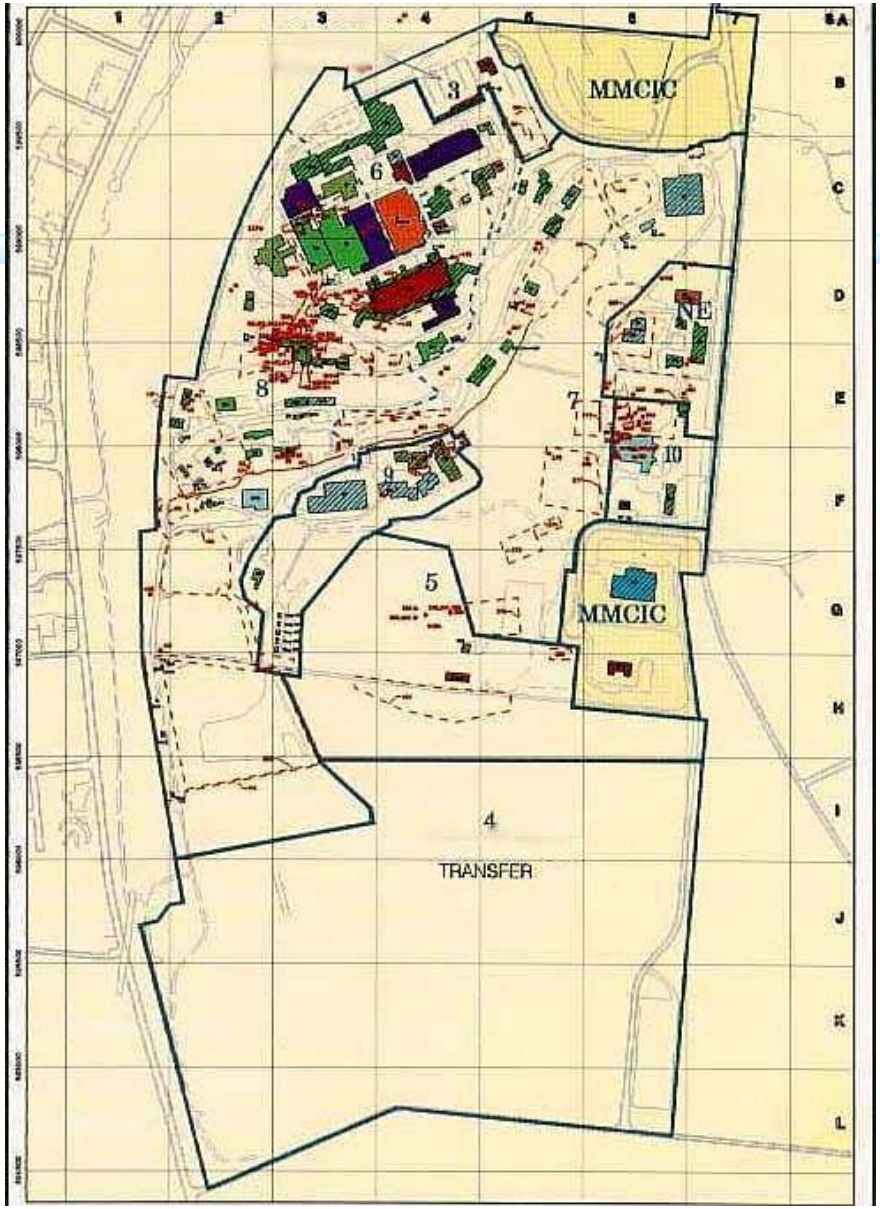
- Part of Manhattan Project
- First permanent A.E.C. facility constructed after WW II
- Long history of working with tritium
- Designated for shutdown in the post cold war consolidation

Mound History (cont.)

- 40+years of weapon components production both nuclear and non-nuclear
  - Main Radionuclides: Pu-238, Pu-239, Th-238, Th-232, Po-210, U-238, U-235, Am-241
- Materials Analyses
- Component Development
- Tritium Recovery

Mound Future

- Sold to City of Miamisburg for industrial park
- Clean to industrial standards
  - Transition as areas are cleaned
  - ROD for each transition parcel
- O&M Plan - The regulatory document
  - More than a ROD - Living document which will be added to as more parcels are transferred
  - Delineates how, when and what will be accomplished to ensure that the site remains protective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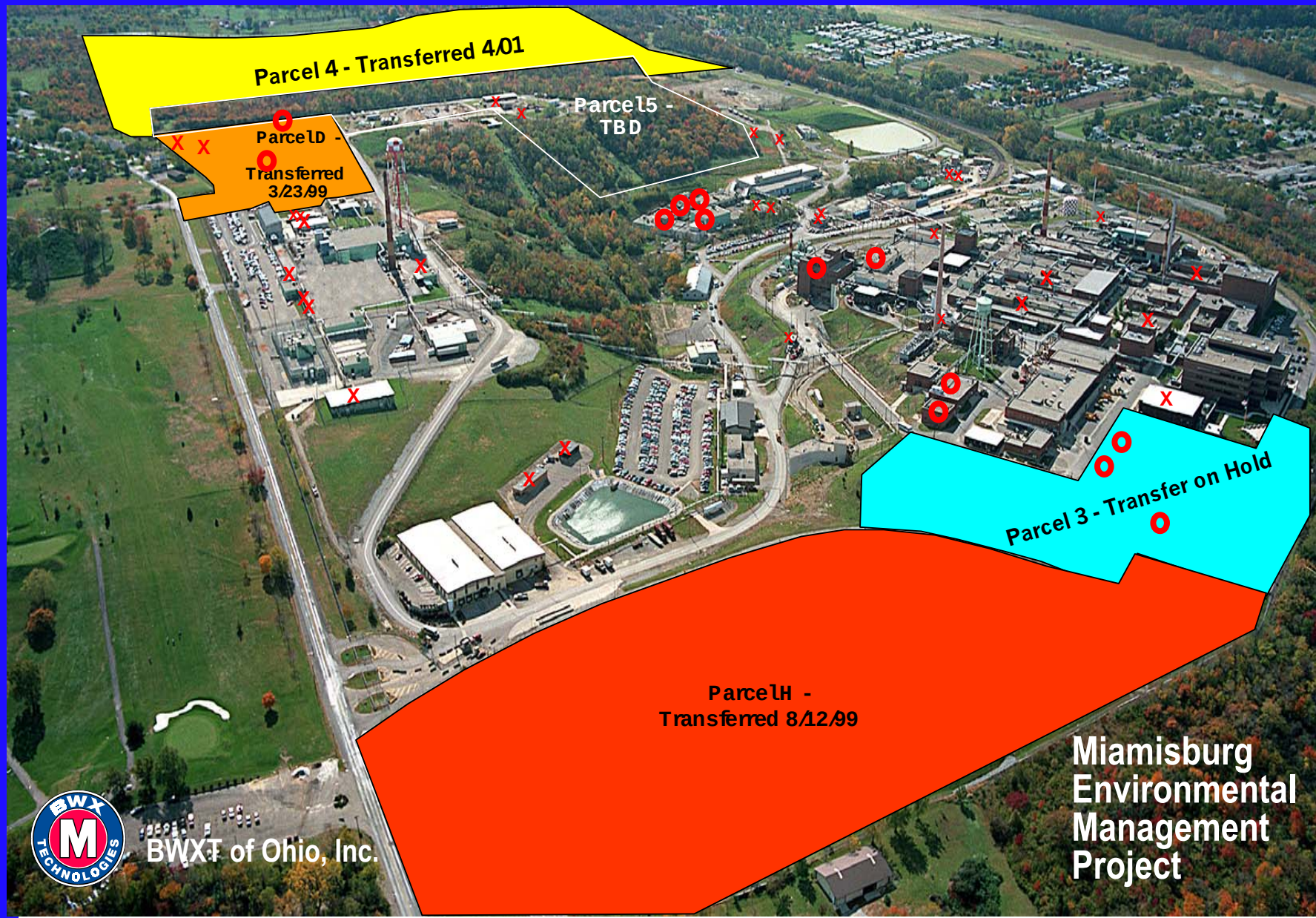

LEGEND: X Structures removed O Transfer/Leased

April, 2001

LTS Initiative

- EM-50, DDFA funded
  - Natural follow on to D&D technology activities
  - Separate program outside of baseline
    - Separate funding
    - Not incentivized in baseline contract
- Compliment activities at Fernald
  - Communicate project knowledge
  - Eliminate redundancy

Purpose

- To systematically explore and identify improved methods to validate the effectiveness of the institutional controls necessary to assure that the public and the environment are protected from long-lived hazardous and radiological wastes associated with prior operations at Mound.

Scope

- The LTSI will deploy a variety of improved, innovative and commercially available technologies in order to:
  - Reduce LTS costs
  - Improve performance of, or perform, a permanent remedy that obviates the need for LTS
  - Improve the understanding of the health or environmental impact of residual contaminants

Primary Focus

- The primary focus of this project is to identify, demonstrate (if needed) and deploy fully developed technologies for monitoring buildings and other above ground issues.

- Also includes monitoring soil, water or other environmental media, when such information is critical to demonstrate success of the selected remedy(s)

Value

- Benefits both thrusts as this is a direct aid to monitoring the final remediation.
  - Expediting departure of Federal presence by proving and implementing LTS monitoring technologies prior to site closure in FY06
- Technologies with operational history will be available for use by both DOE and Non-DOE facilities to satisfy future Long Term Stewardship needs.

Measurable Performance

- Produce quantifiable cost and performance results.
- Select most efficient and cost effective proven technologies for deployment.
- Technologies accepted and deployed prior to site closure in 2006.

Needs Identification Process

- Interactive process with stakeholders Identified Needs
  - Data Management
  - Monitoring the Movement of Soils
  - Monitoring the Installation of Drinking Water Wells
  - Ground Water Monitoring
  - Monitoring for Adherence to “Industrial” Land Use

Data Management:

- Data management technology, including considerations of long term storage, accessibility, usefulness, ease of use and location.
- Information needs to be maintained and kept current as additional activities occur or new information is gathered.
- The public has indicated that accessibility of this data will continue to be important to them.

Monitoring Soil Movement

- The majority of the Mound sits on a rock formation above the City of Miamisburg.
  - Levels of metals have been detected in the soil (such as chromium and arsenic) which, if in the future, become mobile could present a risk.
  - To prevent this, a deed restriction has been placed to prevent wells to be placed on Site.

    (We believe that this control will not be applied to the major aquifer under a portion of the site.)

Monitoring Soil Movement (cont.)

- Monitoring of institutional controls/deed restrictions prohibiting the removal of soil from the site without regulatory approval.
  - One of the deed restrictions associated with the property transfers has been that soil can't leave the facility without prior regulatory approval.
  - This insures that "industrially-clean" soil does not end up in a residential setting
  - Monitored amount is ~"A pickup truck full"~ about 1000 lbs. or about 1 cubic yd.

Monitoring Installation of Wells

- The MEMP sits atop of the Great Miami Buried Valley Aquifer. (Designated Sole-Source Aquafer)
- Monitoring of institutional controls/deed restrictions prohibiting the installation of wells or borings on the site without regulatory approval.

Ground Water Monitoring

- Presently there are several hundred monitoring wells located at the facility.
  - At the time of the last property transfer, it is anticipated the majority of these wells will be abandoned.
  - The remaining wells will be monitored to ensure that no significant contamination develops.

Ground Water Monitoring (cont.)

- Real Time monitoring of water where applicable and appropriate, including:
  - a) groundwater areas that may relate to the Sole Source Aquifer,
  - b) seeps and their source of water, and
  - c) bedrock water.

Process

- Identify Needs
- Technology Team meetings
- Identify existing innovative technologies to satisfy needs
  - Technology Team Searches
  - DOE Data Bases
  - University Searches

Process (Cont.)

- Identify potential vendors
  - Federal Business Opportunities (FedBizOps) Announcement
  - TechCon Website
    - http://web.ead.anl.gov/techcon/projects/moundltsi/
  - Vendor Workshop
    - April 2-3, 2002 in Miamisburg, OH
- Select most promising technologies for deployment.

Process (Cont.)

- Where needed demonstrate the selected technologies to determine their viability.
- If a technology is proven, deployment can proceed without demonstration.
- IUOE invited to observe & report.
- Document the deployment/ demonstration results.
- Issue Final Report.

Schedule

- Project was kicked off in Q4 of FY01.
  - The project TTP and Project Execution Plan were written meeting the milestone.
  - The Technical Team was established and initiated meetings on September 11, 2001.
- Started determining the needs to be met and searching for technologies
- Vendor Workshop / RFP in April 02
- The first technology suite deployment by end of FY02

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Questions and (maybe) Answers